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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,264	12/29/2000	Erhan Guven	TI-32148	7390
23494	7590	03/03/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			LEVITAN, DMITRY	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/750,264	GUVEN ET AL.
	Examiner	Art Unit
	Dmitry Levitan	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 February 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 7-27 is/are pending in the application.  
 4a) Of the above claim(s) 17-27 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 7-16 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

Amendment, filed 02/10/06, has been entered. Claims 7-27 remain pending.

As understood, per Amendment of 2/10/06, submitted with the RCE: "The following claims replace all prior versions and listings of claims in the application", the amendment after final of 08/17/05, comprising amendments to claims 10 and 11, has not been entered.

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 7-16, drawn to packet redundancy transmission technique, classified in class 370, subclass 352.
  - II. Claims 17-27, drawn to inter-modem connecting technique, classified in class 375, subclass 222.
2. Inventions of group I and group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination of group I has separate utility such as dividing data portion into a plurality of segments and organizing the block transmission, which does not require the particulars of the modems inter connection of group II. See MPEP § 806.05(d).
3. Inventions of group II and group I are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination of group II has separate utility such as

Art Unit: 2616

modems inter- connection technique, which does not require the particulars of the dividing data portion into a plurality of segments and organizing the block transmission of group I. See MPEP § 806.05(d).

4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Joseph J. Zito on 2/28/06 a provisional election was made without traverse to prosecute the invention of group I, claims 7-16. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 17-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Specification*

The disclosure is objected to, because table on page 18 is not properly disclosed. For example, it is not understood what X means in the table.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2616

2. Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 limitation "wherein said redundant data corresponds to new data of at least four packets having previous sequence numbers" is unclear as written.

***Claim Rejections - 35 USC § 102***

3. Claims 7, 8, 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Vargo (US 6,167,060).

Regarding claims 7 and 11, Vargo teaches a method for reducing data loss in the event of packet loss in a modem connection over a packet network including transmitting and receiving gateways and modems (connection between Tokyo and North America on Fig. 1, including shown gateways and Internet, 3:35-49, using modems, shown on Fig. 6 and 4:56-67, 5:1-10), comprising:

Providing a packet format including a header, a sequence number and a data portion (packets, inherently containing headers and data portions, sequentially numbered 5:32-36),

Dividing said data portion into a plurality of segments (dividing the data stream sentence into packets, containing letters, as shown on Fig. 7a and 5:58-62),

Designating one of the segments as a new data segment (last packet in each packet groups as shown on Fig. 7a-d and 6:5-19),

Providing sequential blocks of modem data from the transmitting modem to the transmitting gateway (inherently part of the system, because transmitting gateways as shown on

Fig. 1, comprise modems, shown on Fig. 6, so sequential blocks of modem data are transmitted from the transmitting gateway),

Retaining a predetermined number of sequential blocks of modem data at said transmitting gateway, by dropping the oldest block and retaining the most recent block (two blocks as shown on Fig. 7b and 5:63-67, 6:1-5, as block "T" is dropped in the third packet),

Providing the most recent block of data in said new data segment of said data portion of said packet (adding block "h", as shown in the second packet on Fig. 7b),

Providing the remaining retained blocks of data in the remainder of said segments (transmitting the data stream "This is a sentence" 5:51-59), wherein:

Each time said transmitting gateway receives a new block of data from said transmitting modem, said oldest block is dropped from said retained set of data (as shown on Fig. 7b-c and 6:5-20),

Said new block of data is encoded in the next data packet as the new data block and said remaining retained blocks are encoded into said data packet as redundant data blocks (error correction algorithm, providing level two redundancy 6:5-20), and

Transmitting said packets from said transmitting gateway to said receiving gateway (communicating between gateways as shown on Fig. 1).

In addition, regarding claim 11 (as understood), Vargo teaches redundant data corresponds to new data of at least four packets having previous sequence numbers (Vargo teaches attaching redundant data to packets as on Fig. 7a, including different levels of redundancy, shown on Fig. 7b-d, wherein the level of redundancy is greater or equal to 1, as

Art Unit: 2616

disclosed in claim 15 10:50-65, producing four or more packets with previous sequence numbers,

Reading said sequence numbers of consecutively received packets to determine the packet loss (keeping the packets sequence intact 5:32-36),

Retrieving redundant data if packet loss is determined (using one of the redundancy methods on Fig. 7b-d and 5:63-6:35), and

Reading non-redundant data segments while discarding said redundant data if no packet loss is determined (reading “This is a sentence” streams shown on Fig. 7b-d and 5:63-6:35).

4. Regarding claim 8, Vargo teaches a method recovering lost packet, comprising:  
receiving said transmitted packets,  
reading said sequence numbers of consecutively received packets to determine packet loss, including comparing the sequence number of sequentially received packets and determining the difference in the compared sequence numbers (keeping the packets sequences intact by comparing each data packet to the previous data packet to determine packet loss or error 5:31-42),

providing the redundant data corresponding to data lost during said packet loss, to said receiving modem (recreating lost or errored packet utilizing the system redundancy 2:49-52).

5. Regarding claim 12-14, Vargo teaches establishing a redundancy format for a given modem relay connection including (changing the redundancy level to adapt to the changing network condition 2:53-56):

Negotiating a repetition count value (compromising between better speech quality and latency in the network 2:56-61),

Art Unit: 2616

Providing said repetition count value to each end of said modem relay connection (inherently part of the system, because gateway server manages communication session on both ends 3:1-10 and knowing the redundancy level on the other end is essential for the system operation).

In addition, regarding claim 14, Vargo teaches negotiating a whole number value for the number of new bytes in each data packet (changing the packet size to adapt to the changing network condition 2:53-56 and 6:49-60).

*Claim Rejections - 35 USC § 103*

6. Claims 9, 10, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vargo in view of Grabelsky (US 6,678,250).

Vargo substantially teaches the limitations of claims 9, 10, 15 and 16, including a dynamical change of the redundancy level/number of sequential blocks in Fig. 7 due to the network condition 6:39-48.

Vargo does not teach comparing real number of missing packets with the predetermined number of missing packets and reporting the result.

Grabelsky teaches comparing with the predetermined number of missing packets and reporting the result of the comparison (comparing packet loss with alarm threshold and acting on the alarm 11:55-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add teaching of comparing with the predetermined number of missing packets and reporting

Art Unit: 2616

the result of the comparison of Grabelsky to the system of Vargo to increase the packets redundancy level needed to improve the system operation in noisy environment.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan  
Patent Examiner.  
02/28/06.